

# EN445 - Marine Fabrication Methods

Fall 2003

Schedule

Rev -

Week	Day	Month	Topic	Group Projects
1				
	20	August	Lecture Course Introduction and influence of mission on fabrication	
2	25	August	Lecture Materials and Strength of Materials review	
	26	August	Lab In-class design exercise #1	
	27	August	Lecture Quality assurance/control methods in fabrication	
3	1	September	Labor Day!	
	2	September	Lab In-class design exercise #2	
	3	September	Lecture Work Breakdown Structure (WBS)	
4	8	September	Lecture Cutting and forming of aluminum, steel, copper-nickel and titanium	
	9	September	Lab COAST GUARD YARD FIELD TRIP	
	10	September	Lecture Riveting/bolting	
5	15	September	Lecture Brazing	
	16	September	Lab RIVETING/BOLTING (TSD Shop)	
	17	September	Lecture Welding Video	
6	22	September	Lecture Welding	Metal project start
	23	September	Lab BRAZING/WELDING (TSD Shop)	
	24	September	Lecture Concrete construction video	
7	29	September	Lecture Mix design versus fabrication (aggregate, w/c ratio, temp)	Metal WBS due
	30	September	Lab METALS TESTING (R008)	
	1	October	Lecture Mold design (fixed, slip) and yard layout	
8	6	October	Lecture Static, prestressed reinforced concrete	Metal WBS update due
	7	October	Lab CONCRETE FABRICATION and QA (CBU 403)	
	8	October	Lecture Post-tensioned reinforcement	
9	13	October	Columbus Day!	
	14	October	Lab POST-TENSIONED CONCRETE (TSD Shop)	
	15	October	Lecture Special problems of marine concrete (tremie)	Metal project due
10	20	October	Lecture Basic composite material analysis	Concrete project start
	21	October	Lab TREMIE CONCRETE (TSD Shop)	
	22	October	Lecture Midterm exam	
11	27	October	Lecture Resin and fiber properties and formats	Concrete WBS due
	28	October	Lab CONCRETE TESTING (R022/R008)	
	29	October	Lecture Hand fabrication	
12	3	November	Lecture Automated composite lamination	Concrete WBS update due
	4	November	Lab COMPOSITE HAND LAMINATION (TSD Shop)	
	5	November	Lecture Bolted and Bonded Composite Joints	
13	10	November	Lecture Designing for crane selection and use	Concrete project due
	11	November	Veteran's Day!	
	12	November	Lecture Assembly and module construction methods (ashore and afloat)	Composite project start
14	17	November	Lecture Shipyard layout	
	18	November	Lab COMPOSITE MACHINING (TSD Shop)	
	19	November	Lecture On-site civil construction layout	Composite WBS due
15	24	November	Lecture Launching and installation loads and design constraints	
	25	November	Lab JOINING COMPOSITES (TSD Shop)	
	26	November	Lecture Tolerancing	Composite WBS update due
16	1	December	Lecture Design for manufacturability	
	2	December	Lab COMPOSITES TESTING (R008)	
	3	December	Lecture Design for repair and salvage	Composite project due